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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/700,175	06/01/2001	Robert Ghanca-Hercock	36-1527	2020

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EXAMINER

CHANKONG, DOHM

ART UNIT	PAPER NUMBER
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2152

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/700,175

Applicant(s)

GHANEA-HERCOCK ET AL.

Examiner

Dohm Chankong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-20, 29 and 31-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-20, 29, and 31-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

- 1> This action is in response to Applicant's amendment and remarks, filed 5.1.2006.
- Claims 2-4, 7, 9, 11-14, 20, 29 and 36-37 are amended. Claims 38-45 are newly added. Claims 2-20, 29, and 31-45 are presented for further examination.
- 2> This is a final rejection.

### *Response to Arguments*

- 3> Applicant's arguments with respect to claims 2-20, 29, and 31-45 have been considered but are moot in view of the new ground(s) of rejection necessitated by Applicant's amendment of the claims.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 4> Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. Claim 10 lacks proper antecedent basis. Specifically, the claim discloses transmitting a move instruction in response to said monitoring status. Claim 10 depends on claims 9 and 36. Neither of these claims disclose a monitoring status. A

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monitoring status feature is claimed in claim 5 but claim 10 does not depend on claim

5. Thus, claim 10 lacks proper antecedent basis.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5> Claims 11, 12, 29, 36, 37 and 43 are rejected under 35 U.S.C § 102(e) as being anticipated by Baumann et al, “Agent Groups in Mobile Agent Systems”, Conference on Distributed Applications and Interoperable Systems, 1997 [“Baumann”].

6> As to claim 29, Baumann discloses a method of remote computing comprising:

supplying a plurality of parallel processing task programs from a first computer a second computer [pg. 3, Fig. 1 | pg. 5, Fig. 3];

supplying a coordinating program from said first computer to said second computer [pgs. 6-9, section 4.3 “Group Coordinator” where : the agent group migrates from computer to computer, the agent group including a coordinating program]; and

coordinating operation of the plurality of parallel processing task programs on said second computer through the coordinating program executed on said second computer [pgs. 6-9, section 4.3 "Group Coordinator"]].

7> As to claim 36, Baumann discloses a remote computing system comprising:  
a first computer [pg. 3, Fig. 1]; and  
at least one second computer coupled thereto via a communications link [pg. 3, Fig. 1];  
said first computer being programmed to transmit to said at least one second computer via said link [pgs. 2-3, Section 2 "Agent-Based Systems – Our Agent Model"]:

data defining a plurality of heterogeneous programs for performing a computing task at said at least one second computer, said data comprising, for each one of said plurality of heterogeneous programs, code for performing at least a part of said task and for communicating with a coordinating program located at said second computer, said plurality of heterogeneous programs being arranged for parallel execution on the at least second computer [pgs 1-3, pgs 5-9 where : Baumann's group members correspond to claimed heterogeneous programs]; and

data defining said coordinating program, said data comprising code for communicating with and for coordinating said plurality of heterogeneous programs on said at least one second computer and code for communicating with said first computer [pgs 1-3, pgs 5-9 where : Baumann's group coordinator corresponds to claimed coordinating program],

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said at least one second computer thereby being programmed to receive said data and to execute, in parallel, said coordinating program and said plurality of heterogeneous programs [pgs 1-3, pgs 5-9].

8> As to claims 11 and 12, Baumann discloses a coordinating program capable of removing each of said plurality of heterogeneous programs from each of said computers and terminate execution [pgs. 9-10, section 4.4 "Group Administrator | receiver of results"] and code for causing a second computer to remove and terminate the at least one heterogeneous program in the absence of a signal [pgs 9-10, sections 4.3 and 4.4 : "...an out event is generated and transmitted...that terminates all group members"].

9> As to claims 37 and 43, they are rejected for at least the same reasons set forth for claims 29 and 36. Additionally, Baumann discloses the coordinating program coordinating the operations of the heterogeneous programs and that each of the heterogeneous programs performs at least part of said task [pg. 2, ¶1 : "...propagate completion of a subtask" | pgs. 6-9, Section 4.3 "Group coordinator"].

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10> Claims 38, 39 and 44 are rejected under 35 U.S.C § 103(a) as being unpatentable over Baumann.

11> As to claims 38 and 39, Baumann does not expressly disclose determining whether to move (and moving) the coordinating program from the second computer to a third computer which is remotely located from the first and second computers. Baumann does disclose however that agents may move from locations to location to meet other agents and access the locations' services [pg. 2, ¶3]. Additionally, Baumann displays a figure whereby a program migrates from a first computer to a second computer to a third computer [pg. 3, Figure 1].

Thus, it would have been obvious to one of ordinary skill in the art to reasonably infer that the determination functionality as claimed is implicit in Baumann's agents system. Baumann clearly establishes that the mobile agent groups, including the group coordinator migrates to different computers; the step whereby the group determines whether to move to a different computer is thus implicit.

12> As to claim 44, it is rejected for at least the same reasons set forth for claims 38 and 39.

13> Claims 40-42 and 45 are rejected under 35 U.S.C § 103(a) as being unpatentable over Baumann, in view of Wooldridge, "Agent-Based Computing".

14> As to claim 40, Baumann does not disclose receiving a message from a scout agent program being executed on a third computer.

15> In the same field of invention, Wooldridge is directed towards an agent-based computing system [pg. 3, ¶3]. Wooldridge discloses receiving messages from scout agent programs being executed on a computer [pg. 18, ¶2 : "...dispatch agents to collect information on your behalf. Agents will dispatch agents]. It would have been obvious to one of ordinary skill in the art to incorporate Wooldridge's scouting agent functionality into Baumann's agent system. Wooldridge discloses that such functionality is useful for a scouting agent to be sent ahead of time to collect necessary information for other agents or users.

16> As to claims 41, 42 and 45, they are rejected for at least the same reasons set forth for claim 40.

17> Claims 2-4, 6 and 31-33 are rejected under 35 U.S.C § 103(a) as being unpatentable over Baumann, in view of Aridor et al, "Agent Design Patterns: Elements of Agent Application Design" ["Aridor"].

18> As to claims 2-4, 6, 31 and 32, Baumann discloses coordinating program comprising code for transmitting said coordinating program and said plurality of heterogeneous programs to said at least one second computer [pgs. 1-3 : Section 2 "Agent-based systems-Our Agent Model"]. Baumann does not expressly disclose transmitting said programs in response to a predetermined condition, determine the at least one second computer to move said code, or storing a sequence defining an order of preference for at least two second computers.



19> In the same field of invention, Aridor is directed towards a system of mobile agents. Hohl discloses code for transmitting programs in response to a predetermined condition [3.1 Traveling Patterns], determining the at least one second computer to move said code [3.1 Traveling Patterns], and storing a sequence defining an order of preference for at least two second computers [3.1 Traveling Patterns]. It would have been obvious to one of ordinary skill in the art to incorporate Aridor's teachings of an itinerary into Baumann's agent system. One would have been motivated to provide such a combination as the itinerary feature would enable sending Baumann's agents to multiple destinations in a list and select an appropriate destination.

20> As to claim 33, Baumann does not expressly disclose determination to which one of a plurality of other computers the coordinating program will be transmitted.

21> Aridor discloses feature of determination to which one of a plurality of other computers the coordinating program will be transmitted [Section 3.1 : Traveling Patterns]. It would have been obvious to one of ordinary skill in the art to incorporate Aridor's itinerary feature into Baumann's agent system in order to easily determine which destination computers an agent is transmitted.

22> Claims 5, 7, 8, 14, 16-20 and 34 are rejected under 35 U.S.C § 103(a) as being unpatentable over Baumann, in view of Hofmann et al, U.S Patent No. 6.263.983.

23> As to claims 5, 7 and 34 Baumann does not expressly disclose monitoring the status of a second computer or controlling the heterogeneous programs in dependence upon said monitoring. As to claim 8, Baumann does disclose controlling a number of heterogeneous programs [pgs. 5-6, Section 4.1 "Group Initiator"] but does not base control on said monitoring.

24> Hofmann discloses the use of discover agents that have the ability to collect information (monitor) the hardware configuration of a computer [column 7 «lines 38-51»] and controlling programs in dependence upon said monitoring [column 4 «lines 13-38» : discover rules]. It would have been obvious to one of ordinary skill in the art to modify Baumann to include Hofmann's discover functionality. One would have been particularly motivated to enable data and information collection by mobile agents as taught by Hofmann to provide useful information to other agents [see Hofmann, column 1 «lines 48-53»].

25> As to claim 14, it is rejected for at least the same reasons discussed in claims 5-8.

26> As to claims 16-20, Hofmann discloses monitoring a computer's hardware, including processor and memory information [column 7 «lines 4-17»]. It would have been obvious that Hofmann's hardware would include other well known hardware devices as storage capacity, input devices and battery life.

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27> Claims 9, 10, 13, 33 and 35 are rejected under 35 U.S.C § 103(a) as being unpatentable over Baumann, in view of Walsh, U.S Patent No. 6,233,601.

28> As to claims 9 and 10, Baumann does disclose at least one second computer comprises at least two second computers [pg. 3, Fig. 1 : location B and location C] and at least one heterogeneous program of said plurality of heterogeneous programs comprise code for transmitting said at least one heterogeneous program to another of said at least one second computers [pg. 2, Section 2 “Agent-Based Systems” | pgs. 5-10]. Baumann does not expressly disclose a move instruction.

29> In the same field of invention, Walsh is directed towards a mobile agent system. Walsh discloses moving agents in response to a move instruction from a coordinating program, and transmitting a move instruction in response to a monitoring status [Figures 1, 2 | column 3 «lines 55-65» | column 4 «line 47» to column 5 «line 4»]. It would have been obvious to one of ordinary skill in the art to incorporate Walsh's move instruction feature into Baumann. Baumann already discloses moving agents from computers and Walsh's teachings would enable the moving functionality to be based on instructions generated by a coordinating program.

30> As to claims 13 and 35, Baumann does not disclose a support program.

31> Walsh discloses determining whether a computer will support a coordinating program and said plurality of heterogeneous computer programs and, where a second computer will not support said coordinating program and said plurality of heterogeneous computer programs to transmit and cause to execute thereon, a support program to adapt and the second computer to support said coordinating program and said plurality of heterogeneous computer programs [column 4 «lines 20-35» : downloading of additional code necessary to operate on the destination computer]. It would have been obvious to one of ordinary skill in the art to implement Walsh's downloading of code into Baumann's system. Baumann already contemplates sending code to new locations [pg. 2, ¶3]. Walsh's teachings would improve Baumann by enabling a more flexible system whereby agents can download additional code.

32> Claim 15 is rejected under 35 U.S.C § 103(a) as being unpatentable over Baumann and Hofmann, in further view of Walsh.

33> As to claim 15, Baumann and Hofmann disclose programs for monitoring a second computer but do not disclose signaling computer selection data based on said monitoring.

34> Walsh discloses signaling computer selection data to a coordinating program [Figure 6]. It would have been obvious to one of ordinary skill in the art to combine Baumann, Hofmann and Walsh's teachings to provide a combination whereby an agent's itinerary is

based on monitoring information. One would have been motivated to provide such a combination as to provide a more informed means of constructing an agent's itinerary.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Frew et al, U.S Patent No. 6.009.456;

White et al, U.S Patent No. 6.016.393;

Devarakonda et al, U.S Patent No. 6.055.562;

Paciorek, U.S Patent No. 6.065.039;

Bigus et al, U.S Patent No. 6.192.354;

Chang et al, U.S Patent No. 6.226.666.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

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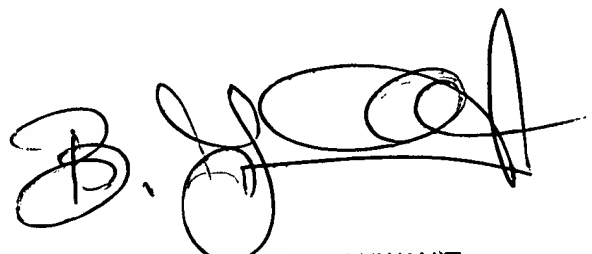
advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dohm Chankong whose telephone number is 571.272.3942. The examiner can normally be reached on Monday-Thursday [7:30 AM to 4:30 PM].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571.272.3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DC

A handwritten signature in black ink, appearing to be 'B. Jaroenchonwanit', with a large, stylized flourish at the end.

BUNJOB JAROENCHONWANIT  
SUPERVISORY PATENT EXAMINER